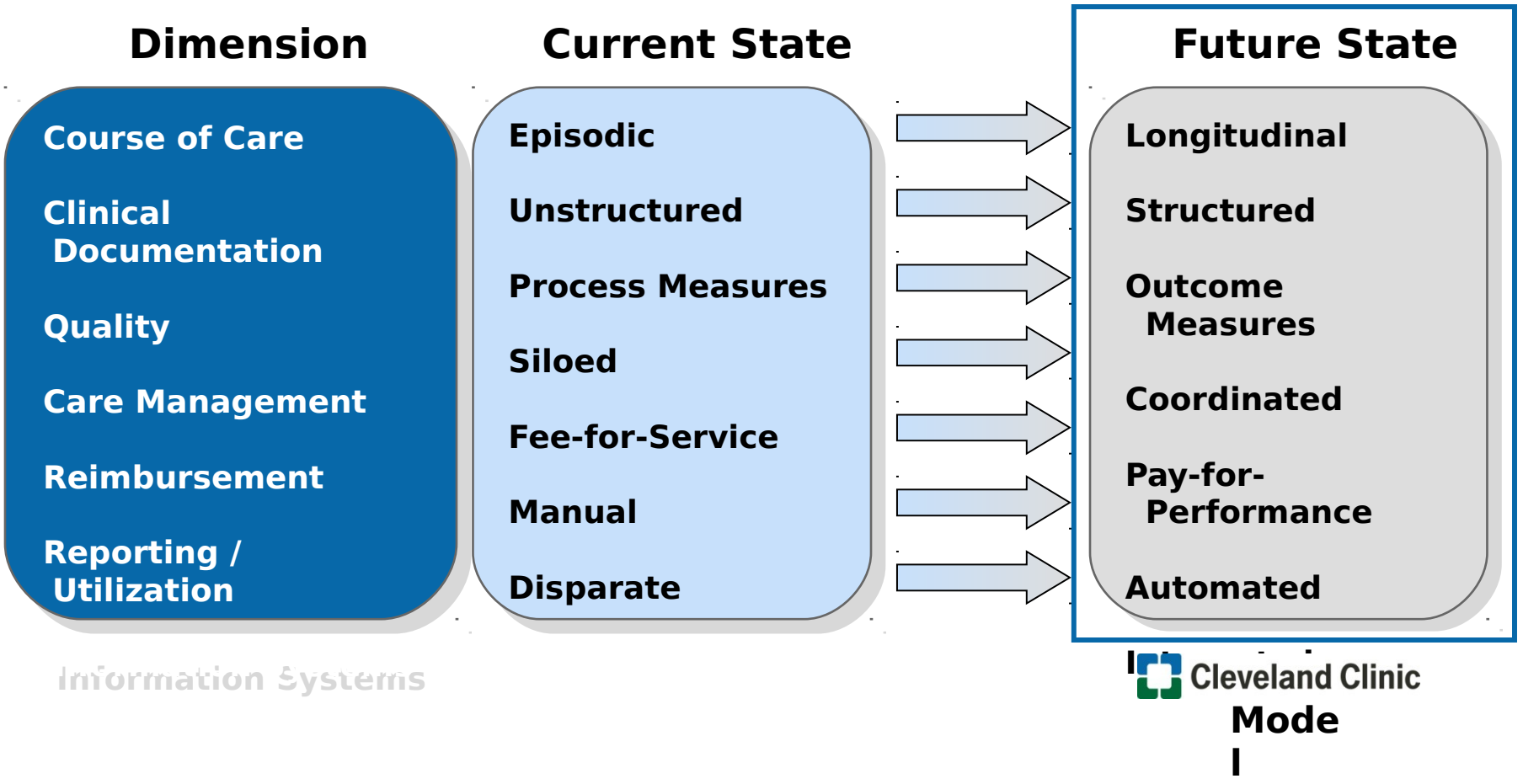
Cleveland Clinic

Patient Centered Care: Institutes and Care Paths

Michael Phillips, M.D.

January 26, 2011

Challenge and Opportunity

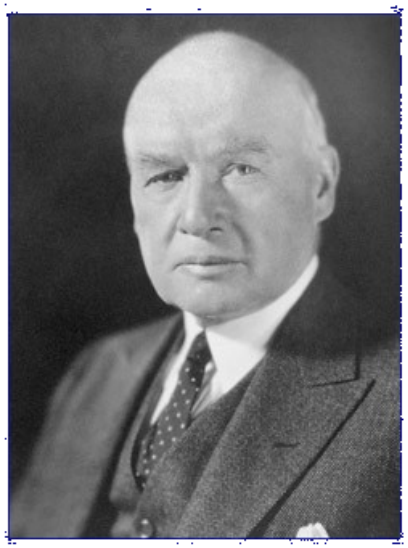


CCHS Mission

Dr. Frank E. Bunts

Dr. George W. Crile

- Care for the sick
- Investigate their problems
- Educate those who serve



Dr. William E. Lower

Dr. John Phillips

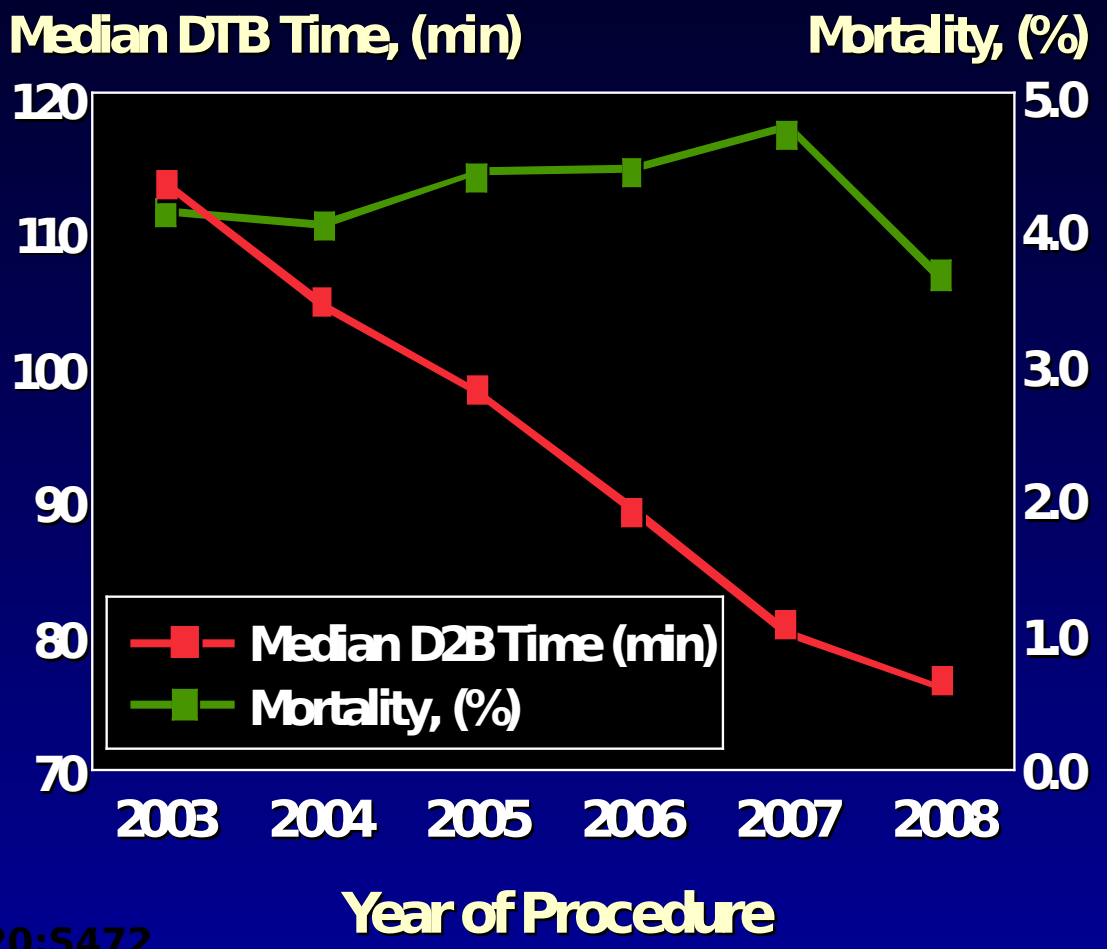
“To Act as Unit”

Quality and Value

$$\frac{\text{OUTCOME}}{\text{COST}}$$

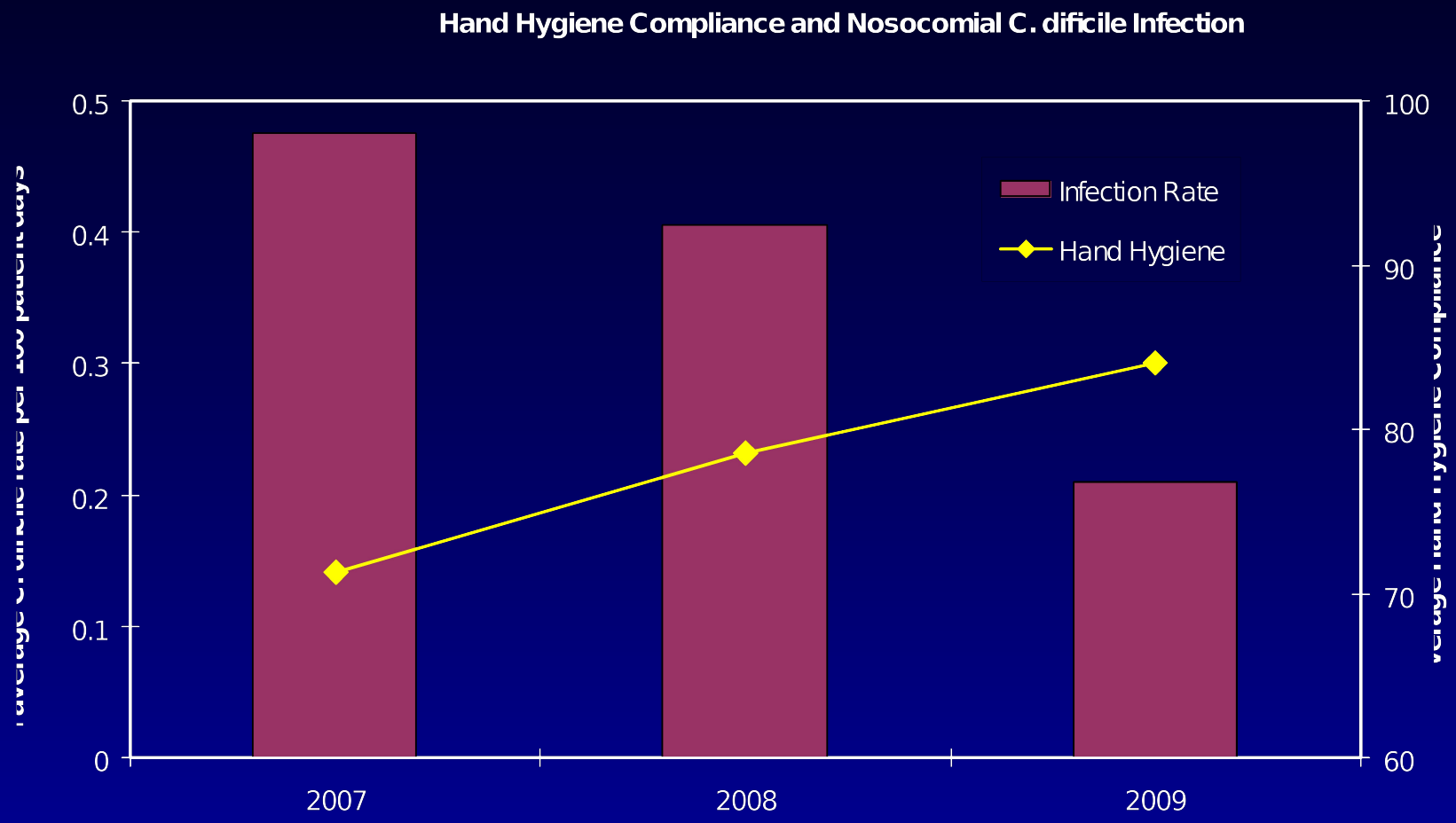
STEMI: Door to Balloon Time and Mortality

8,770 consecutive
STEMI
Pts in Michigan
BCBS
2003-8



Flynn, et al., AHA, 2009; Circ. 120:S472

Hand Hygiene vs Infection



Our Path

Institute Model

Care Path

High Value Healthcare Collaborative

Premises for Institute Model

The challenge is to ***improve value*** / ***quality of outcomes.***

Value is best measured at the ***disease and treatment level.***

Multi-disciplinary organ-based Institutes facilitate approac

Measurements will drive improvement feedback loop.

Competition will become the engine of progress and reform

Institute Themes

Patient Centric

- Access/Convenience/Offerings/Outcomes

Enterprise Approach

Multidisciplinary Disease Based Centers

- Improved and New Product Lines/Process/Innovation

Informatics

- Metrics/Process Improvement/Research

Longitudinal Care

The Neurological Institute

Divisions/Departments

- Neurology
- Neurosurgery
- Psychiatry and Psychology
- Physical Medicine and Rehabilitation

- Neuroimaging
- Neurosciences
- Nursing
- PT/OT
- Home Care

Centers

Brain Tumor & Neuro-Oncology Center

Neurological Center for Pain

Center for Neuroradiology

Center for Neurological Restoration

Center for Pediatric Neurology and Neurosurgery

Center for Spine Health

Center for Brain Health

Cerebrovascular Center

Epilepsy Center

Mellen Center for Multiple Sclerosis

Neuromuscular Center

Behavioral Health

Sleep Disorders Center

PM&R / Rehabilitation Services

Ranked **#6** in the country by 2010 US News & World Report

Institute Center Themes

Clinical, education, research and business (P&L)

IT enabled standardization, outcome, quality

Multidisciplinary

- Multiple levels of care givers
- Recruitment needs identified, jointly carried ou

Co-location

Continuum of care

Strategy

Institute Department Themes

Maintain culture internally and externally

Conflict resolution

Educational Programs

New Centers

Strategy

The Enterprise

Alignment with Health System

Coordination and evolution of Multidisciplinary Centers

- Clinical Care, Research, Education
- New Product lines and Innovation

Interaction and alignment with institutes

Evolution of product line thinking

Strategy

Challenges

Disease versus Department

Scaling up versus scaling down

Enterprise versus Location

Product Line versus Cost Center

Inter Institute

National Perception of “Institute Model”

Cleveland Clinic Care Pathways

Multidisciplinary, Programmed and Imbedded as Part of Patient Care :

Standardize

Measure

Educate and Study

Compare

Intervene

Improve

Disseminate

Stroke Care Path

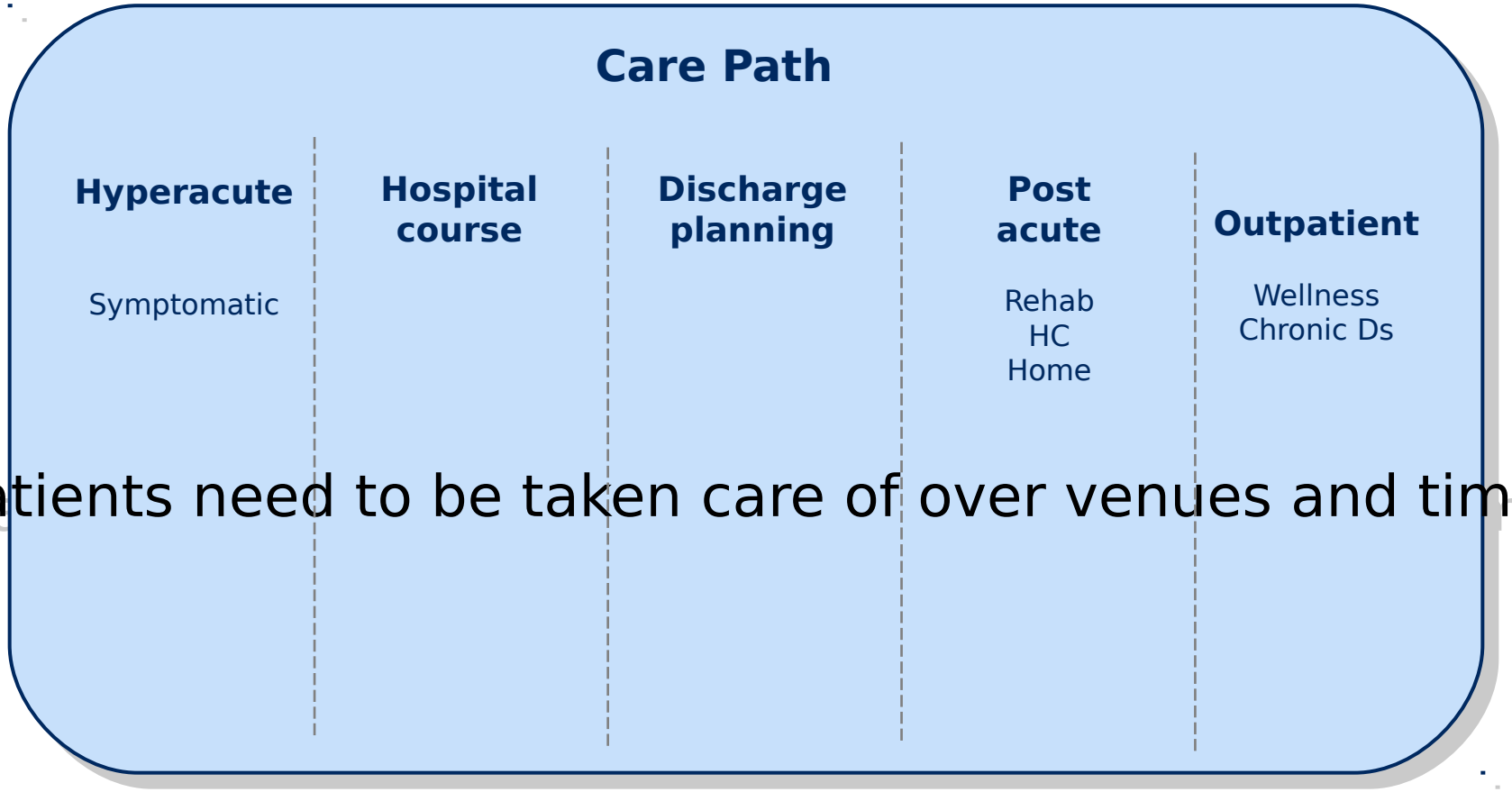
Excellent evidence-based data

National guidelines for performance

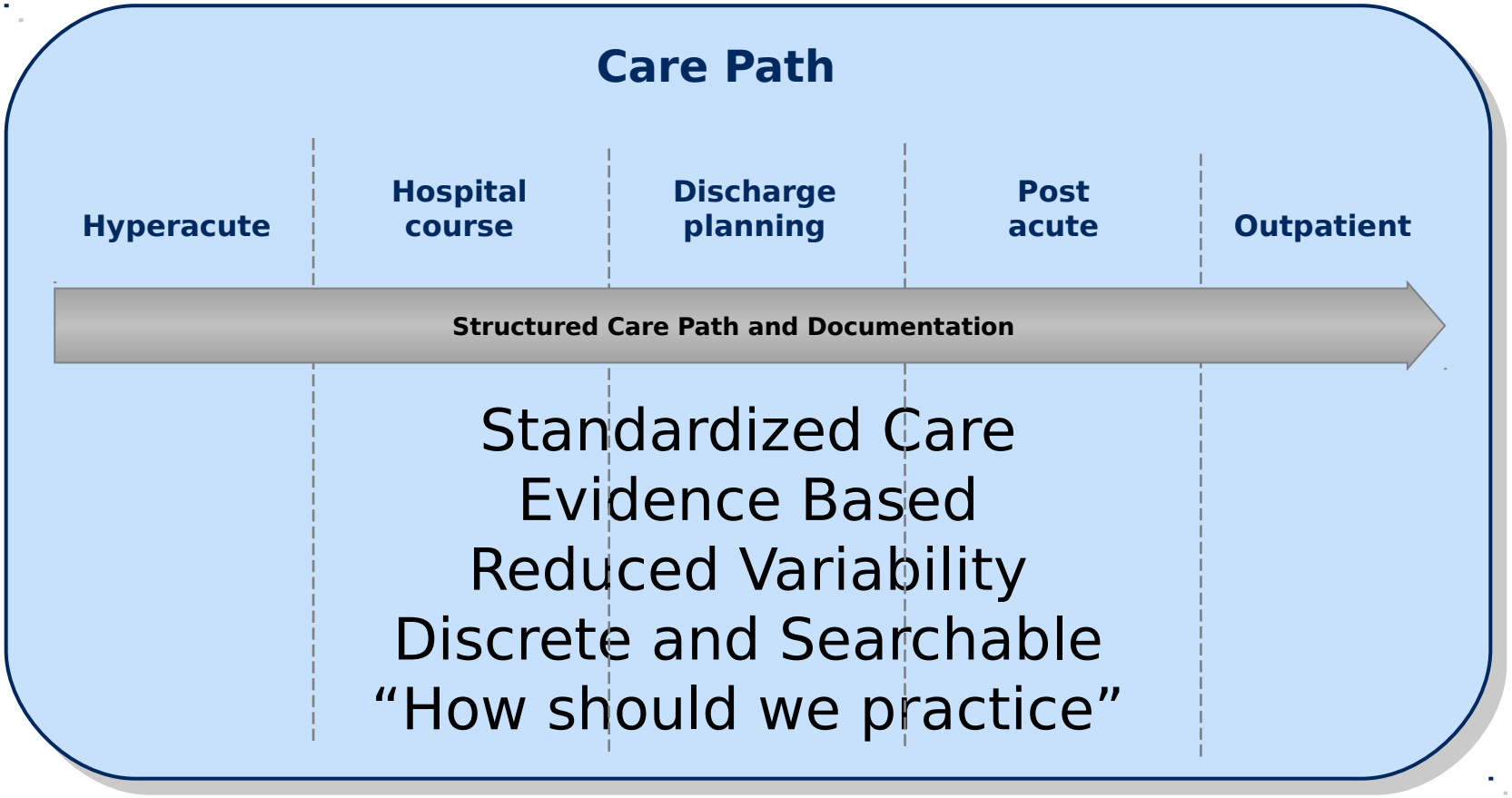
Clear need for timely coordinated care

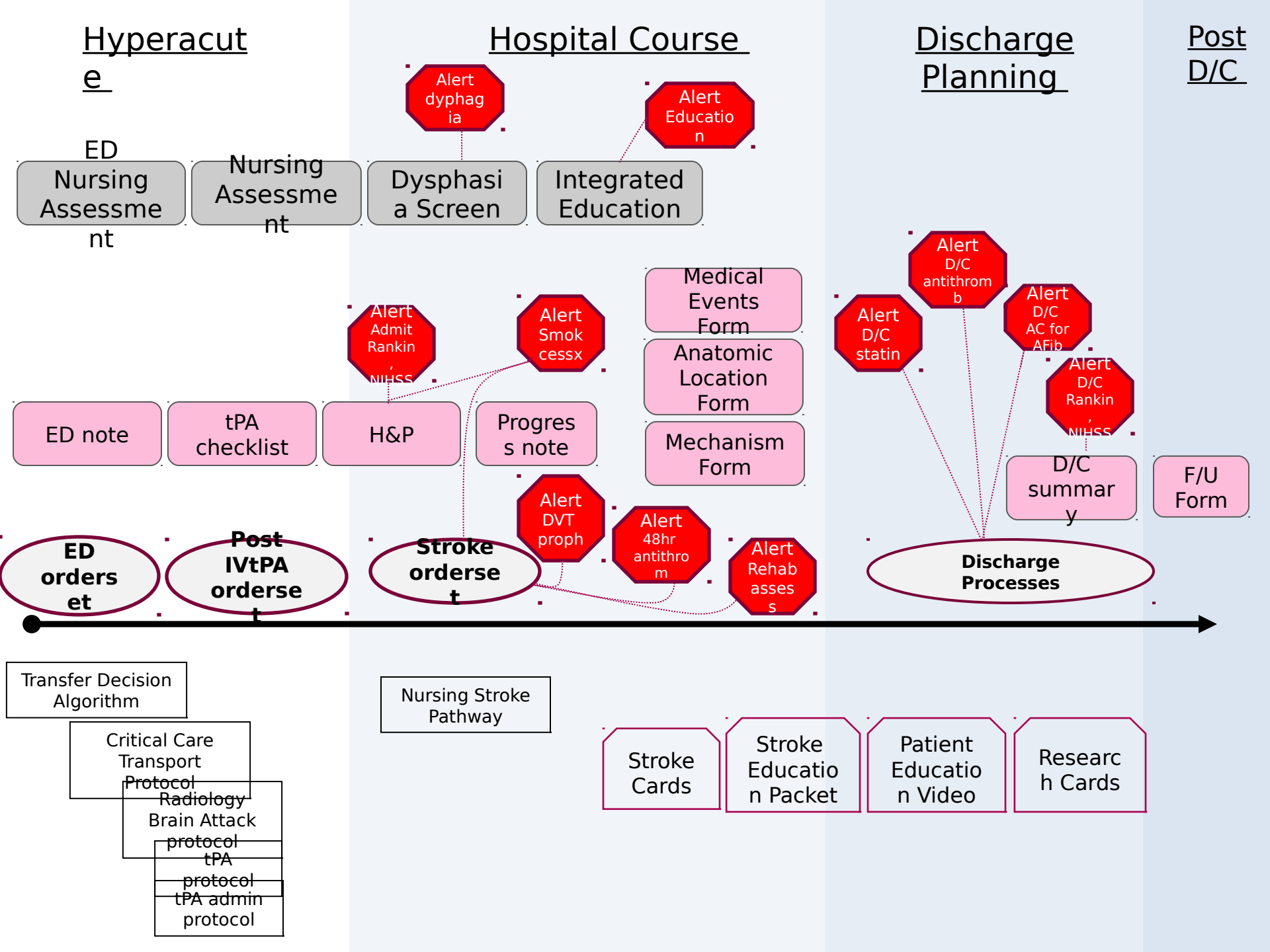
- Only 4% get the care they need
- 2 million neurons per minute

Cleveland Clinic Care Pathways

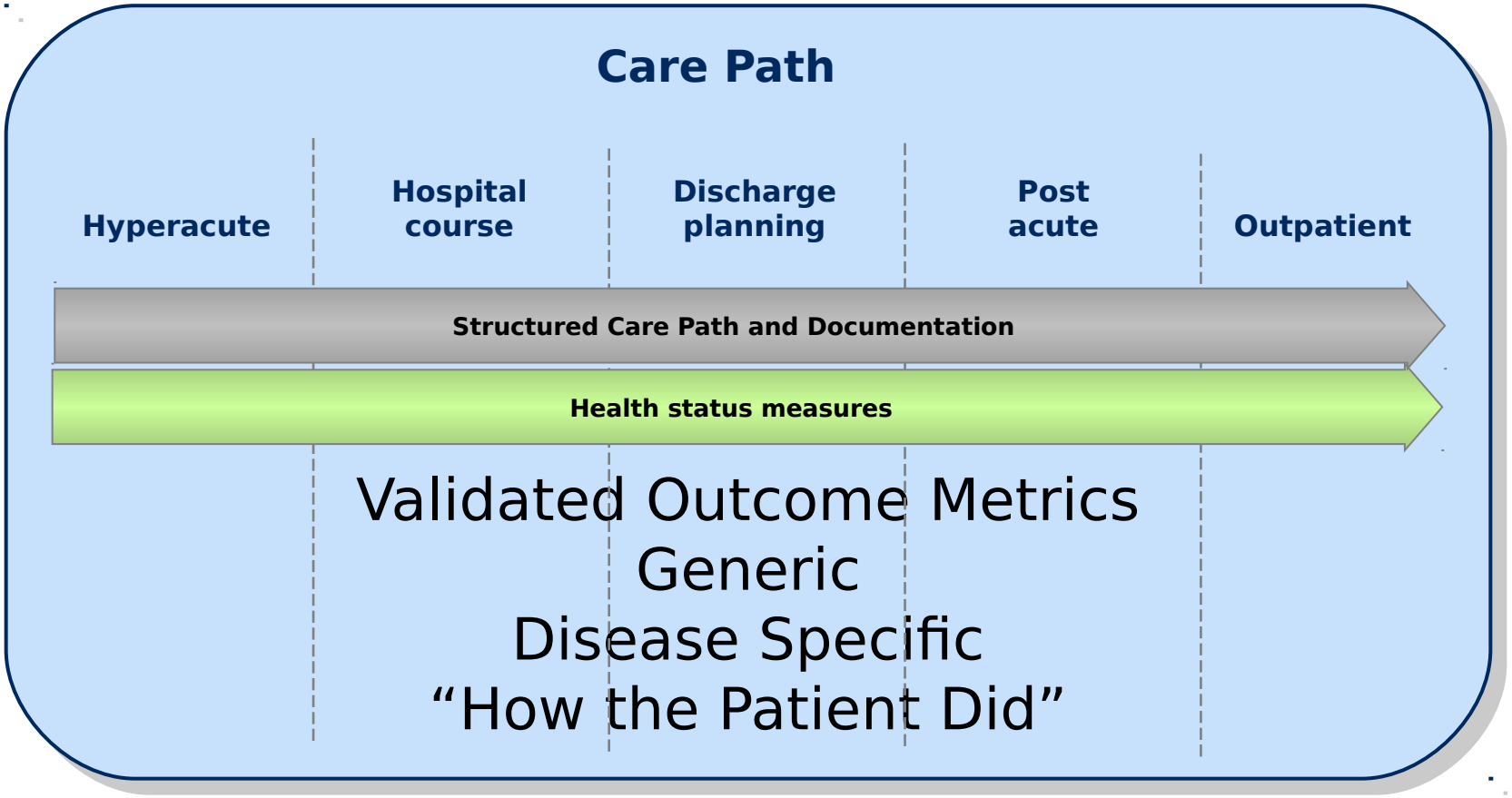


Cleveland Clinic Care Pathways

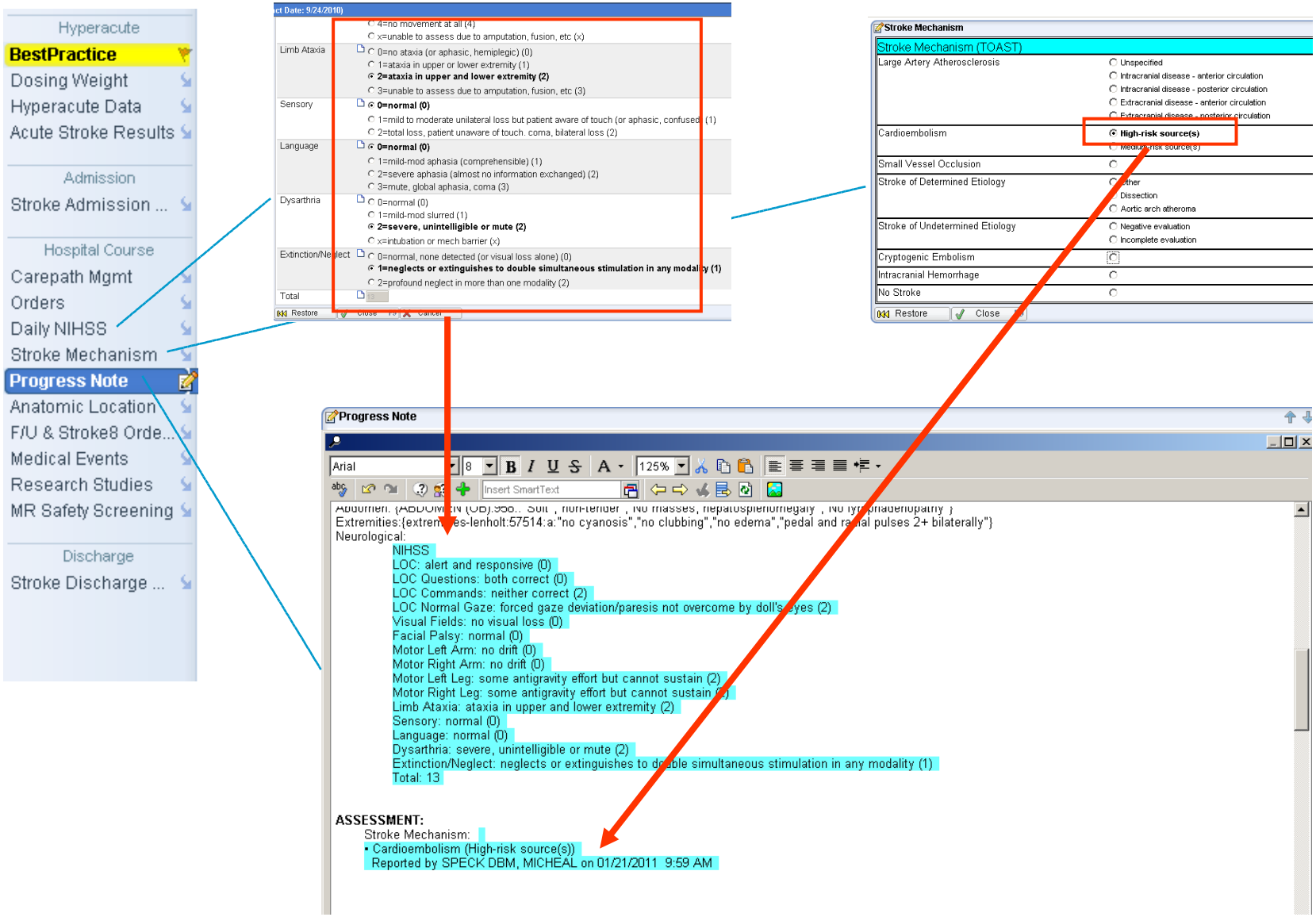



Hyperacute
Hospital Course
Discharge Planning
Post D/C
ED Nursing Assessment
Nursing Assessment
Dysphasia Screen
Integrated Education
Alert dyphagia
Alert Education
Alert Admit Rankin, NIHSS
Alert Smokcessx
Medical Events Form
Anatomic Location Form
Mechanism Form
Alert D/C antithromb
Alert D/C statin
Alert D/C AC for AFib
Alert D/C Rankin, NIHSS
ED note
tPA checklist
H&P
Progress note
D/C summary
F/U Form
Alert DVT proph
Alert 48hr antithrom
Alert Rehab assess
ED orderset
Post IVtPA orderset
Stroke orderset
Discharge Processes
Transfer Decision Algorithm
Critical Care Transport Protocol
Radiology Brain Attack protocol
tPA protocol
tPA admin protocol
Nursing Stroke Pathway
Stroke Cards
Stroke Education Packet
Patient Education Video
Research Cards

Cleveland Clinic Care Pathways



Efficient Clinical Workflow



- **Stroke 8:**

Stroke Prevention:
Antithrombotic therapy: Ordered.

• LOVENOX 100 MG/ML SUB-Q	100 mg	

Statin therapy: Ordered.

• atorvastatin	40 mg	q HS

Blood pressure control:
Optimum range: 120-140.
Treatment range for PRN medications: >> 180.

	10/14/2010 7:35 AM	10/14/2010 3:00 PM	10/15/2010 12:00 AM	10/15/2010 7:35 AM
BP:	121/81	107/78	112/61	127/76

Glycemic control: Well controlled.

Prevention of Complications:
DVT prophylaxis: Ordered.

• heparin	5,000 Units	TID

Temperature: Normothermic.

	10/14/2010 7:35 AM	10/14/2010 3:00 PM	10/15/2010 12:00 AM	10/15/2010 7:35 AM
Temp:	97.3 °F (36.3 °C)	96.8 °F (36 °C)	98.8 °F (37.1 °C)	98.2 °F (36.8 °C)

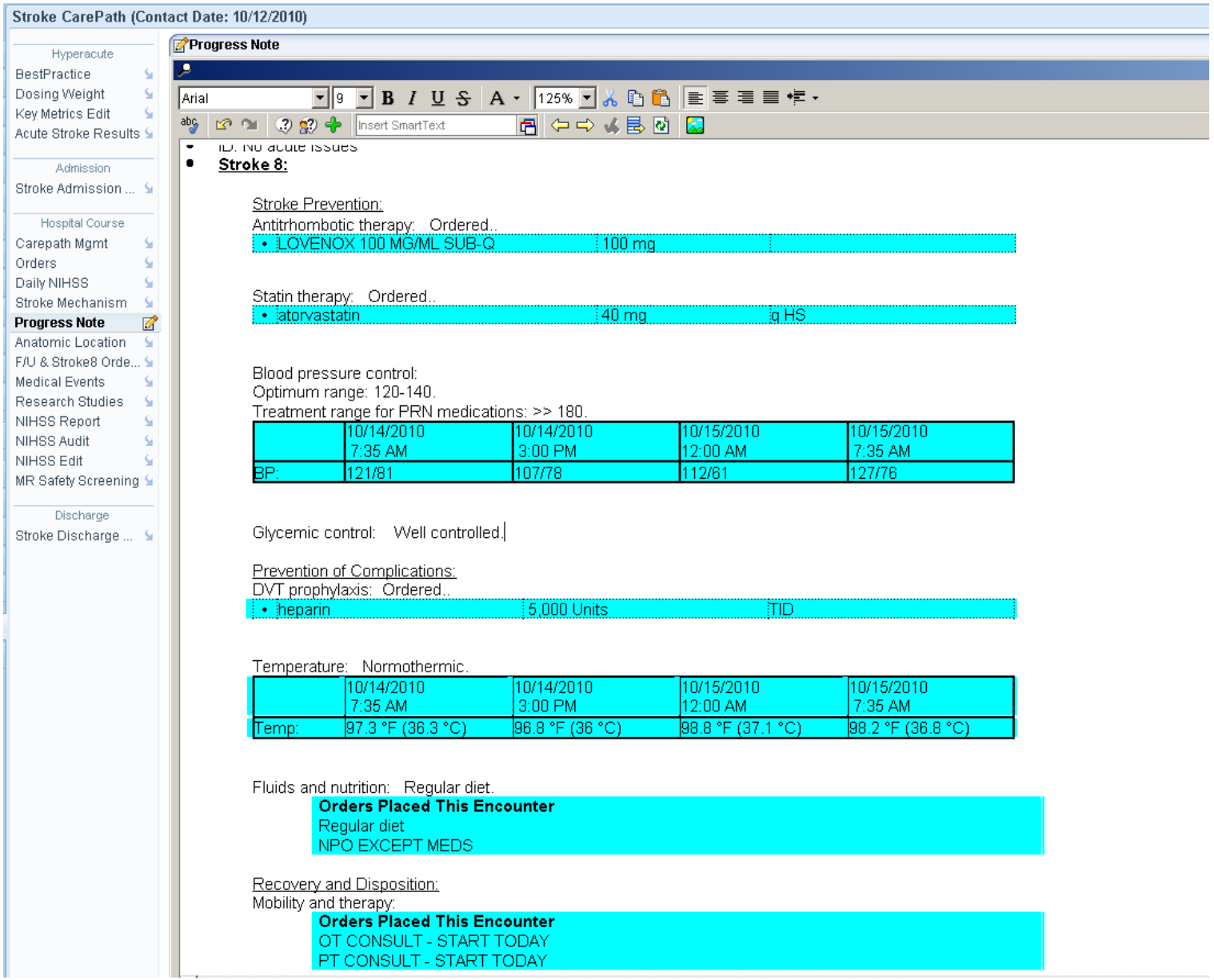
Fluids and nutrition: Regular diet.

Orders Placed This Encounter
Regular diet
NPO EXCEPT MEDS
NPO EXCEPT MEDS

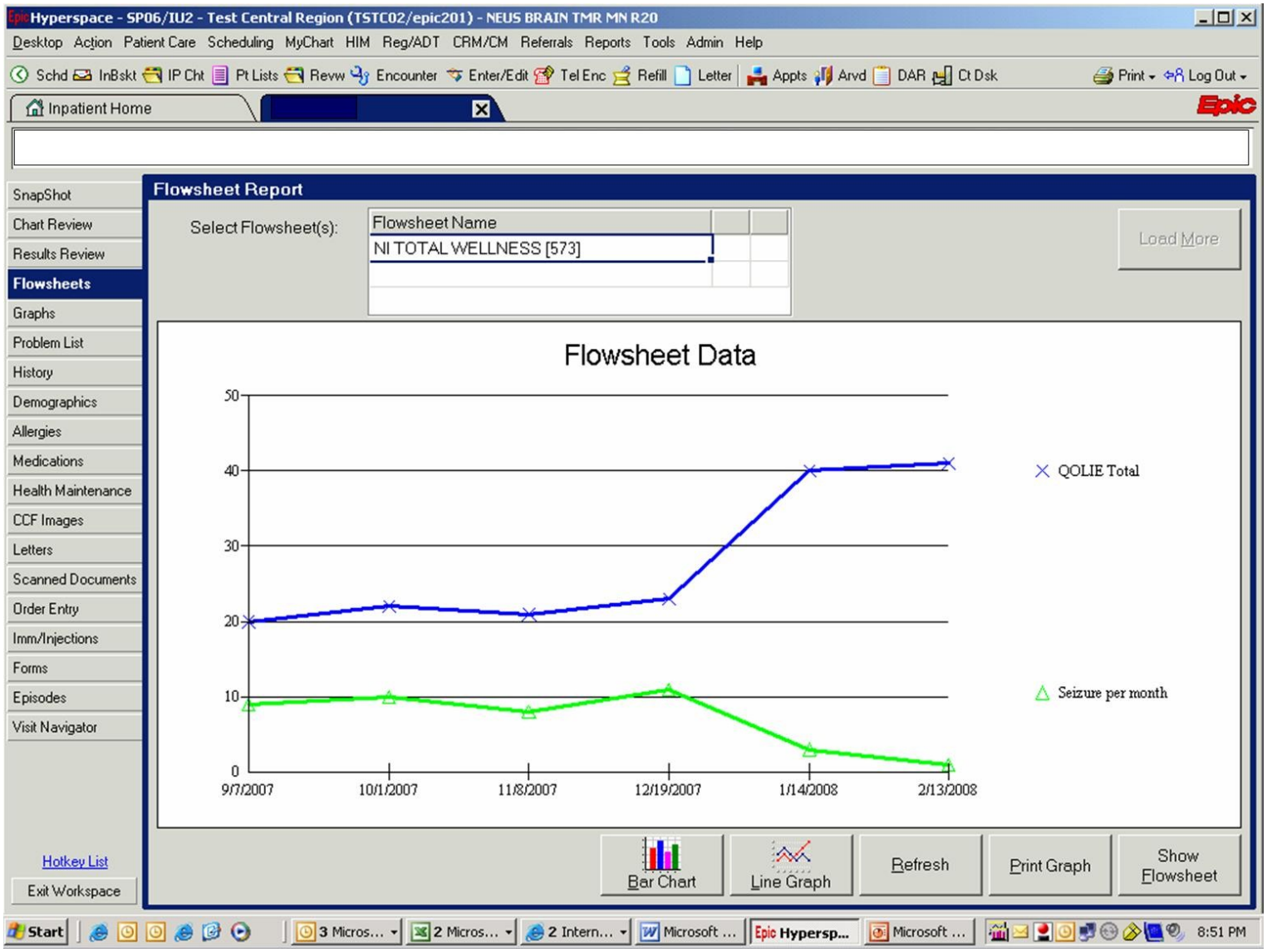
Recovery and Disposition:
Mobility and therapy:

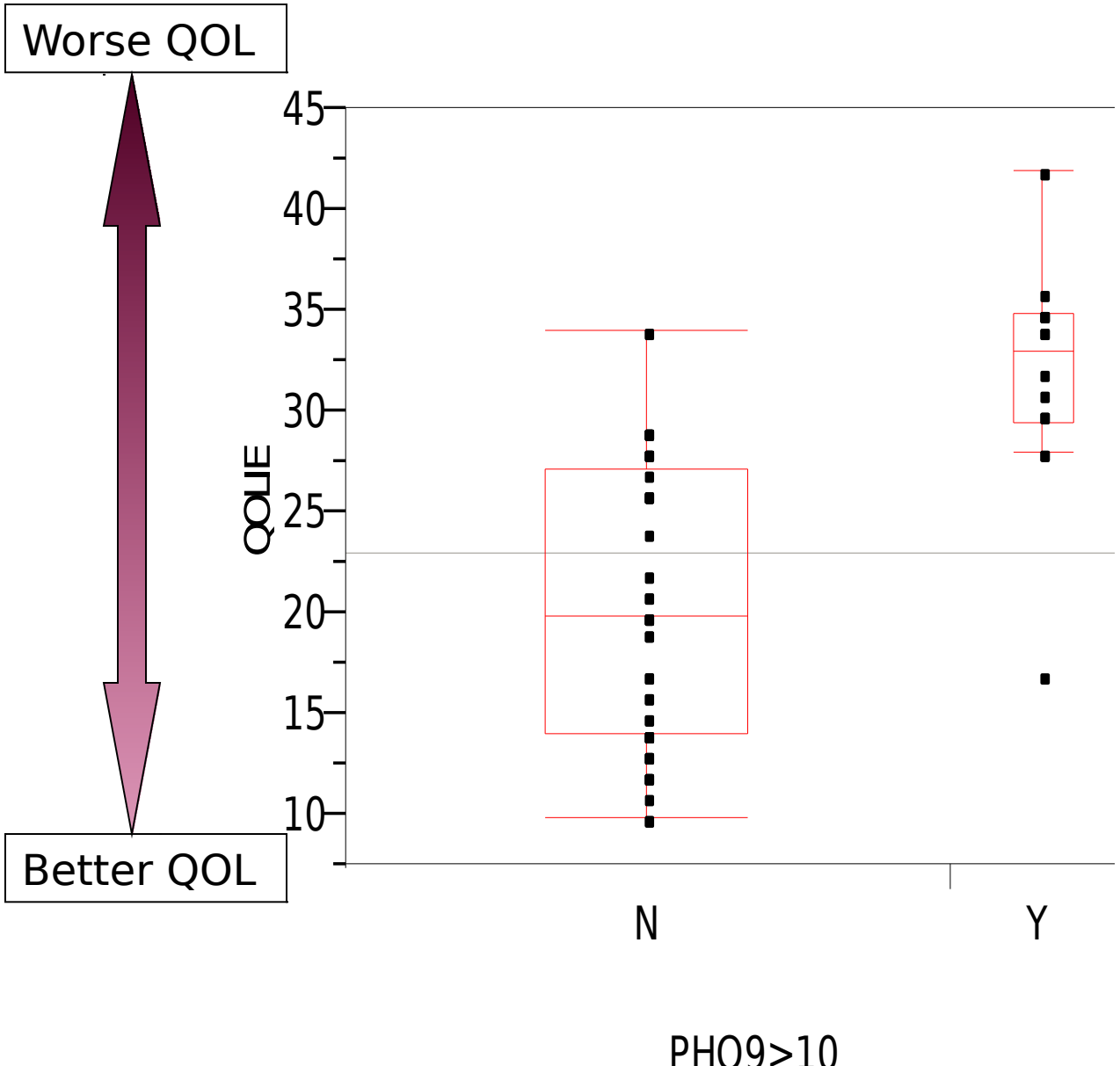
Orders Placed This Encounter
OT CONSULT - START TODAY
PT CONSULT - START TODAY

- Disposition: **Acute rehab.**
- Follow up appointments:
  1. Cerebrovascular: Pending
  2. Primary Care: pending



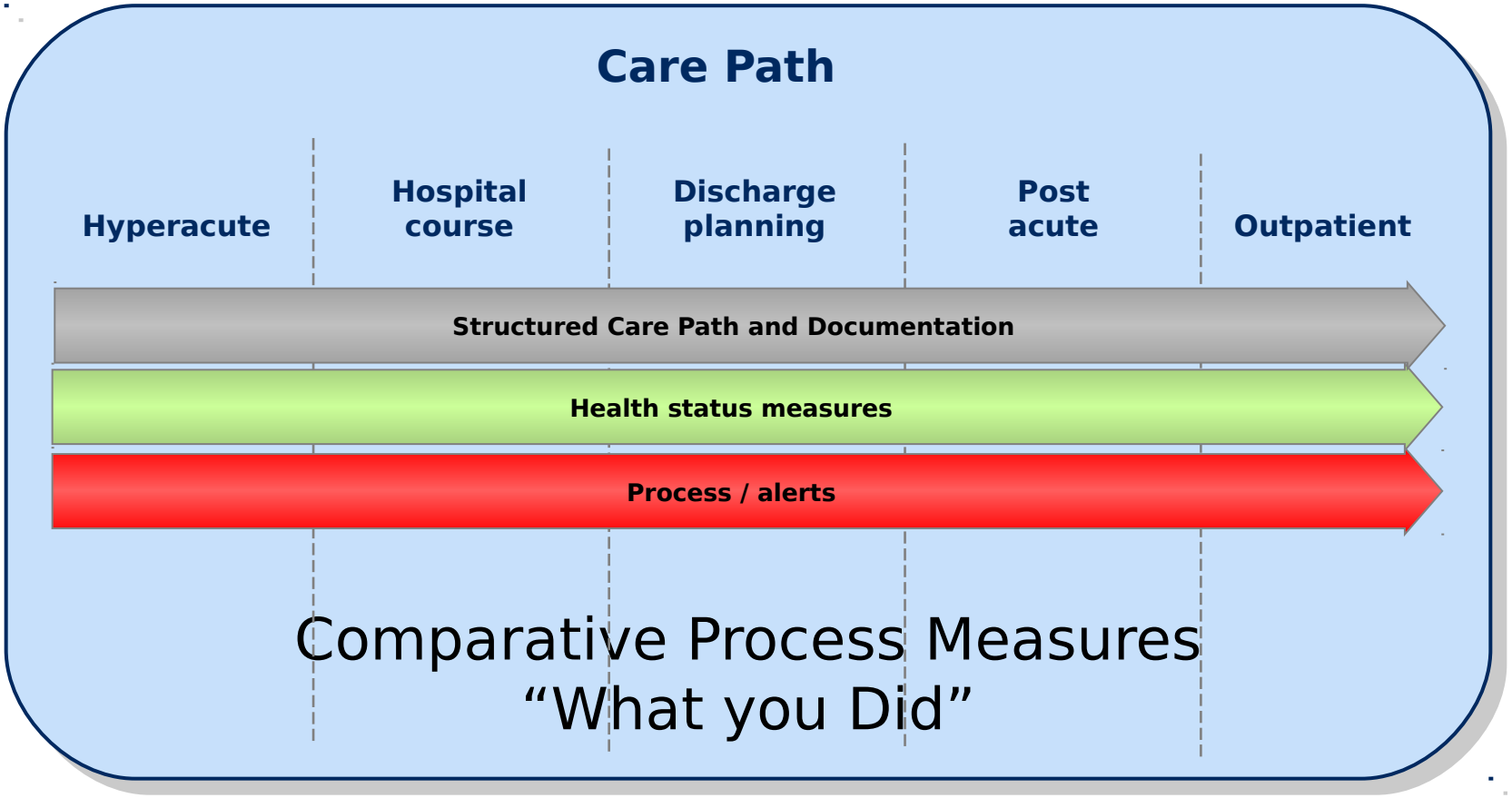
How is the patient



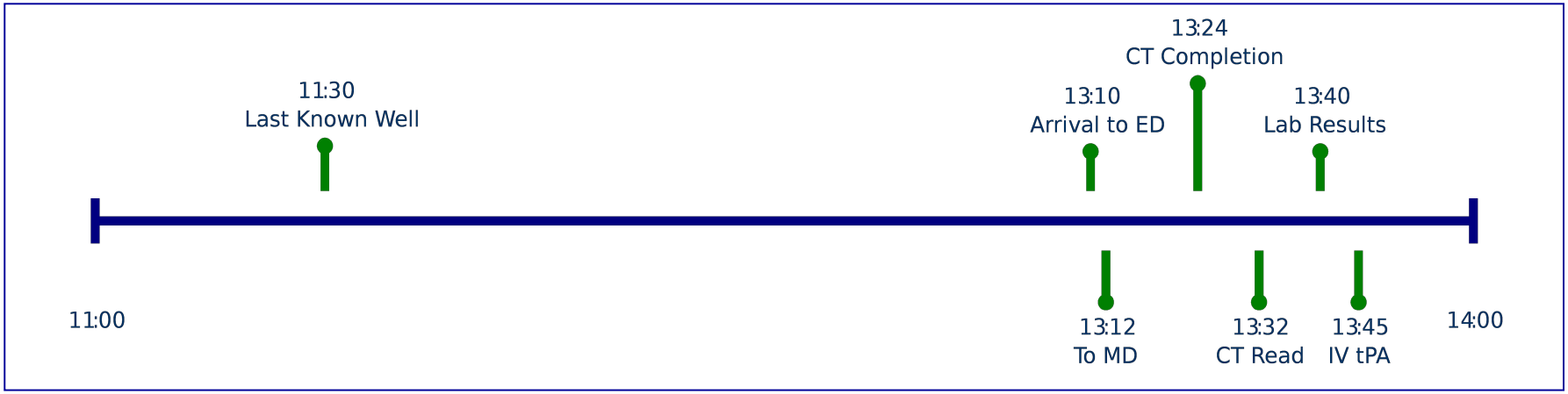


Depressed epilepsy patients (with PHQ-9 score>10) have a worse quality of life, as reflected by higher QOLIE score (Mean of 31.9 vs 20.3; p<0.0001):

Cleveland Clinic Care Pathways



Time Variables for Acute Evaluation – Patient Level

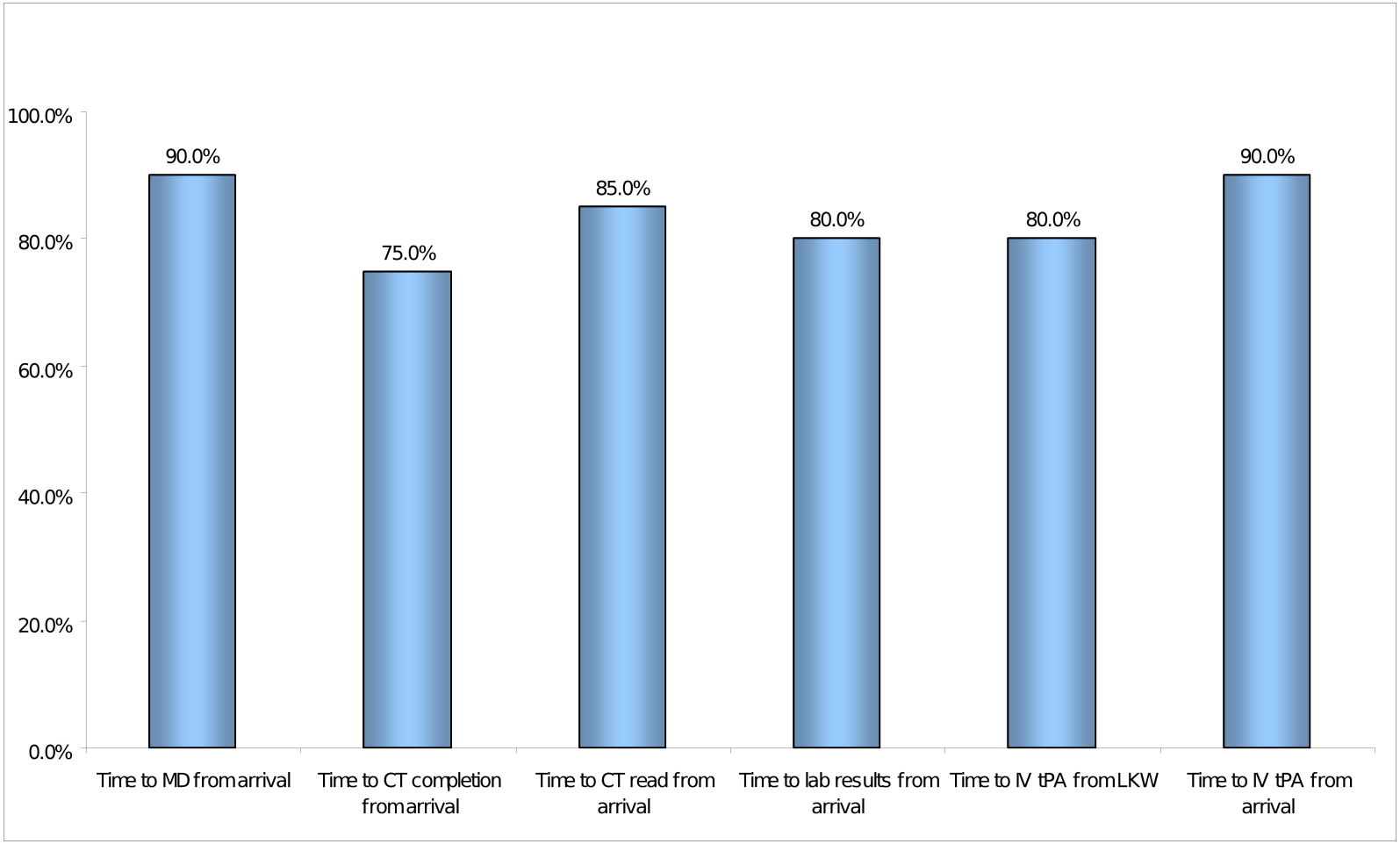


Measure	Target (minutes)	Actual (minutes)	Achieved Target
Time to arrival from LKW	-	100	-
Time to MD from arrival	10	2	●
Time to CT completion from arrival	25	14	●
Time to CT read from arrival	45	22	●
Time to lab results from arrival	45	30	●
Time to IV tPA from LKW	270	135	●
Time to IV tPA from arrival	60	35	●

Performance Measure	Completed
Anti-thrombotic by Hospital Day 2	●
Patient Education	●
Smoking Cessation	
Swallow Screen	●
OT/PT	
DVT Prophylaxis	●
D/C Statin	●
D/C Anti-thrombotic	●
D/C Anit-coagulant	

Time Variables for Acute Evaluation Main Campus System Scorecard

% Compliance with Time Variable Targets



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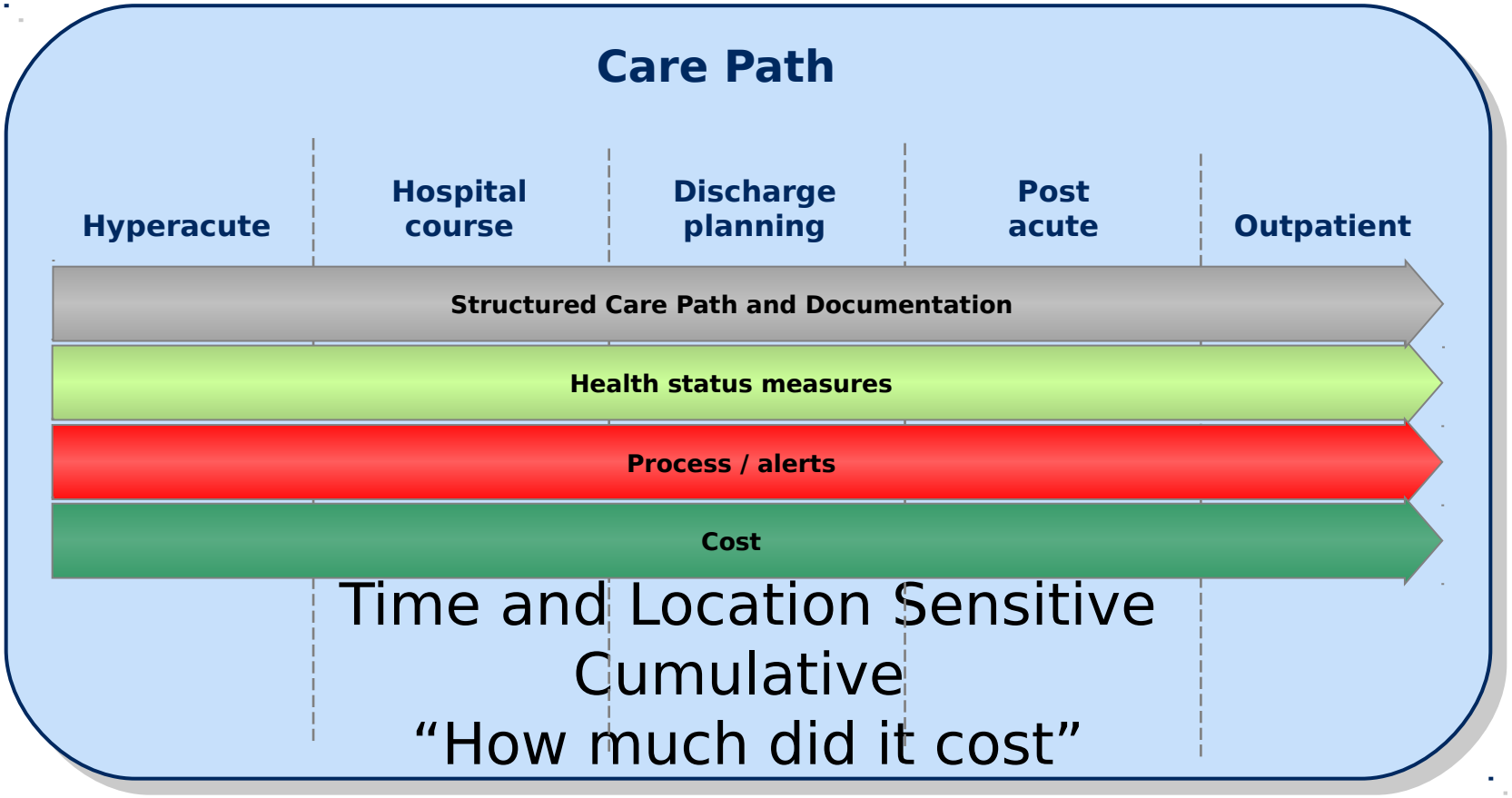
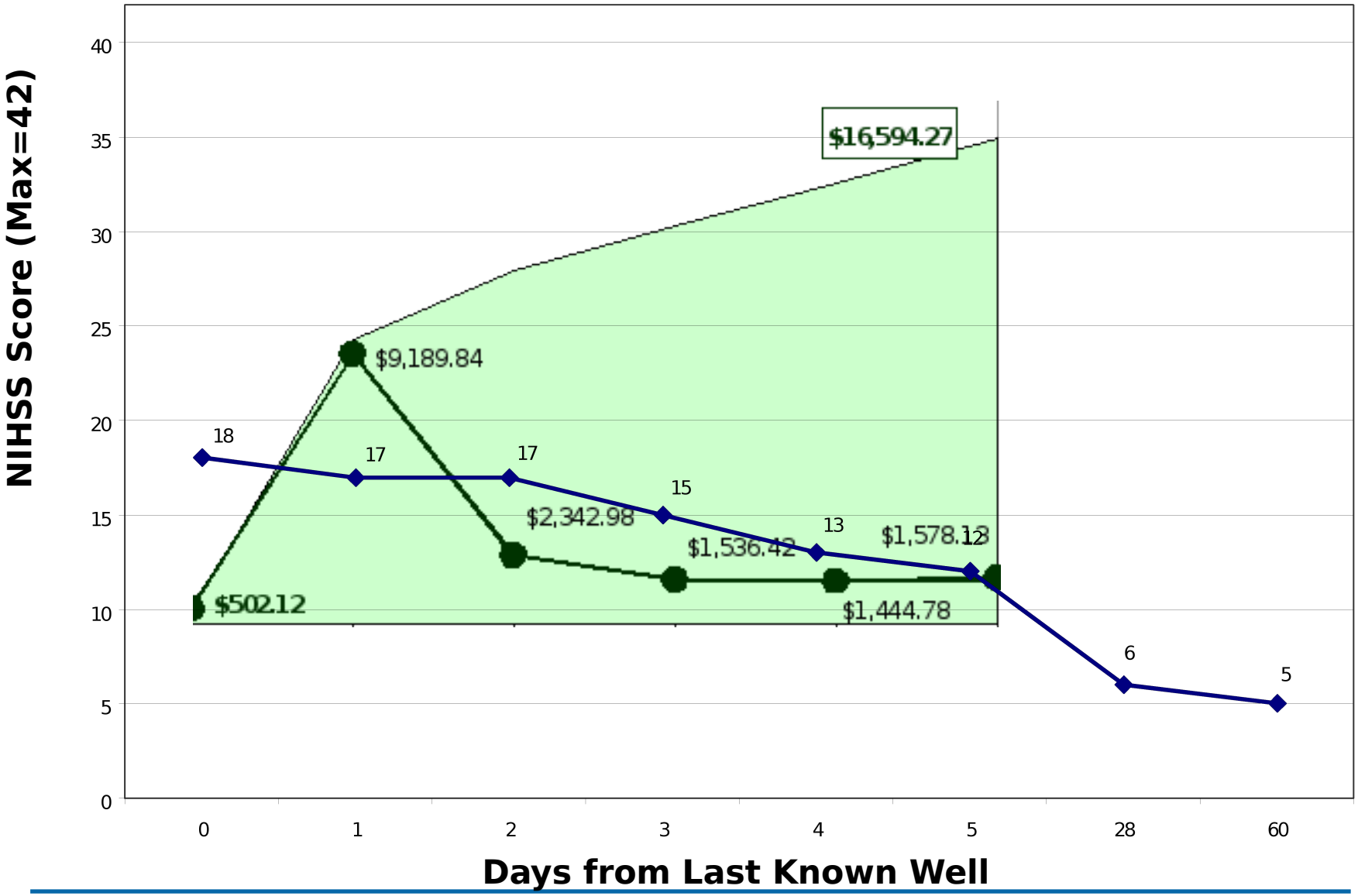


Cost



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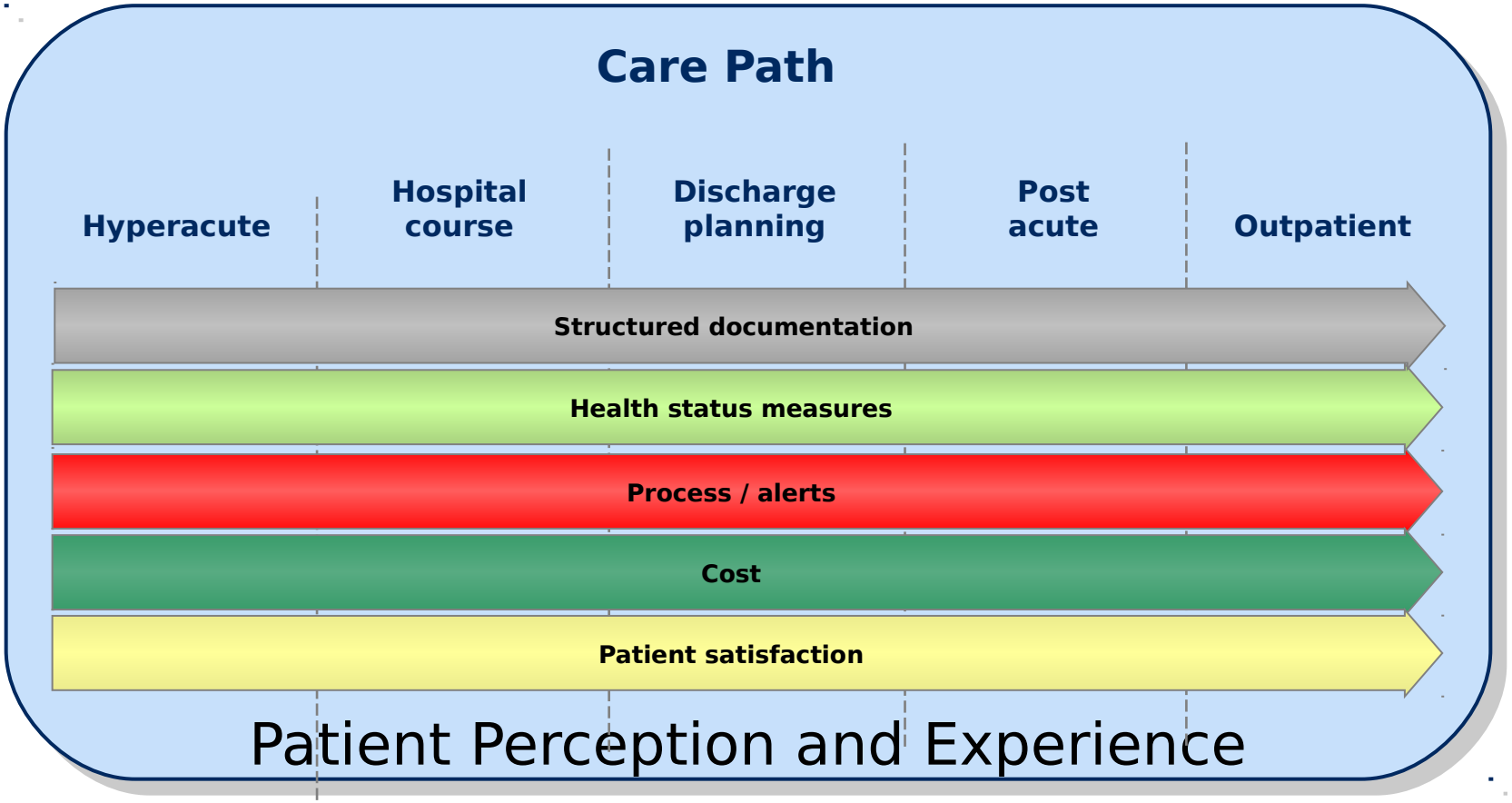


Inpatient Satisfaction Survey - Chart

Cleveland Clinic

Date Range: 10/25/2010 to 10/29/2010

Location(s): H060

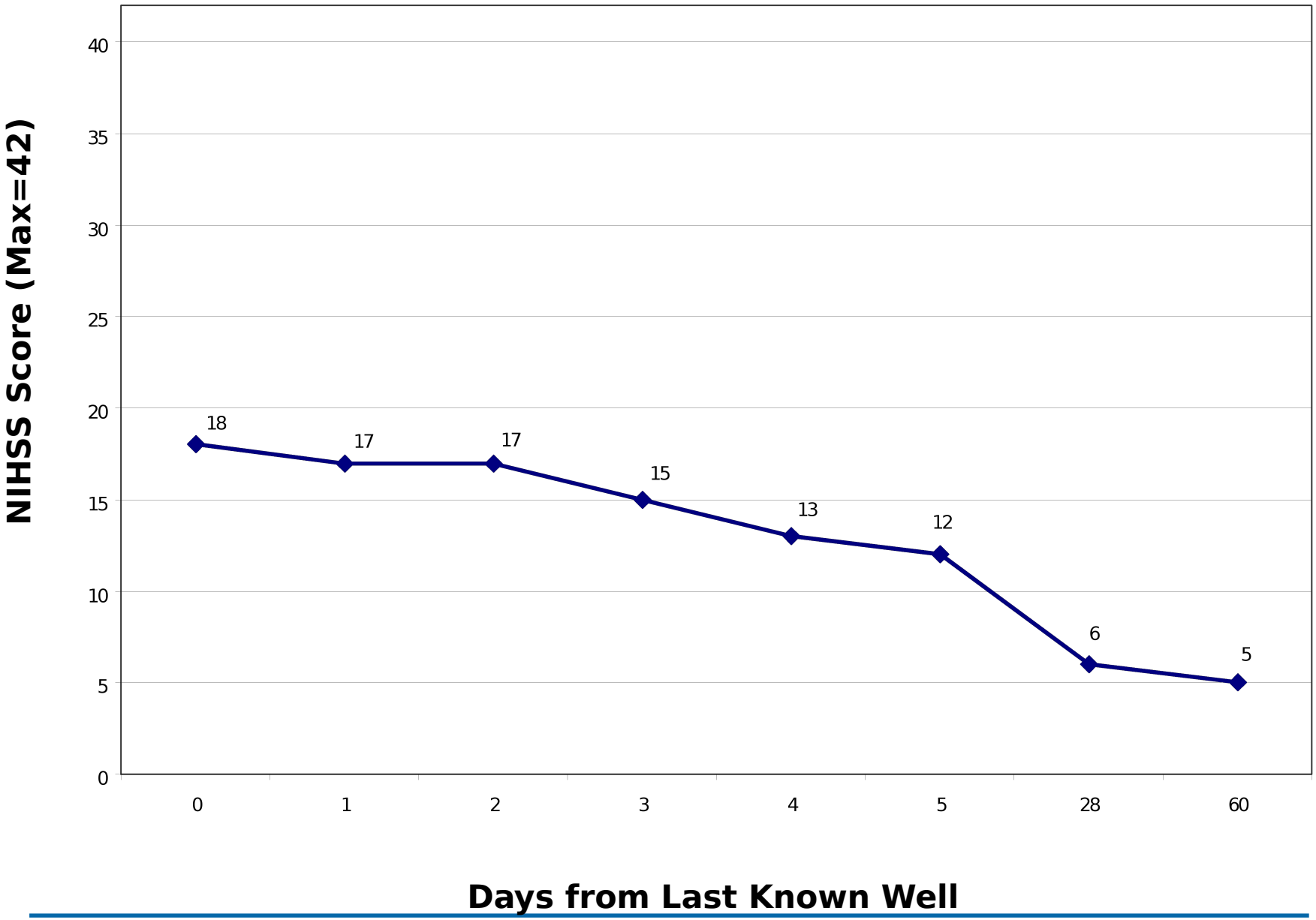
			1) Expectation	2) Know Plan	3) Address Needs	4) In Charge	5) Patient Comfort	6) MD Communication	7) Visitor Comfort	Total Score
Tue	22110985	H060-22	5	5	5	Y	5	5	5	30
	55294526	H060-05	5	5	5	Y	5	5	5	30
	60378924	H060-17	5	5	5	Y	5	5	5	30
	21895806	H060-07	5	5	4	Y	5	5	4	28
	55908370	H060-16	5	4	4	Y	5	5	5	28
	23957159	H060-26	3	5	3	Y	4	5	4	24
	50753468	H060-09	4	5	5	Y	4	5	5	28
	49367368	H060-15	5							5
	33368844	H060-27	5	5	5	Y	5	1	5	26
	19710637	H060-13	4	4	5	Y	5	4	5	27
	39020564	H060-01	4	4	5	Y	5	5	5	28
	49370164	H060-06	3	1	1	N	5	3	4	17
Wed	49267894	H060-01	5	4	4	Y	5	4	4	26
	26869285	H060-15	5	5	5	Y	5	5	5	30
	40862200	H060-03	5	5	5	Y	5	5	5	30
	40862200	H060-03	5	5	5	Y	5	5	5	30
	10232031	H060-10	5	4	4	N	5	4	5	27
	45511138	H060-12	4	4	3	Y	4	4	5	24
	44272008	H060-08	4	2	4	N	3	5	4	22
	46667972	H060-21	4	3	4	Y	4	4	5	24
	18149290	H060-11	4	3	4	N	4	4	4	23

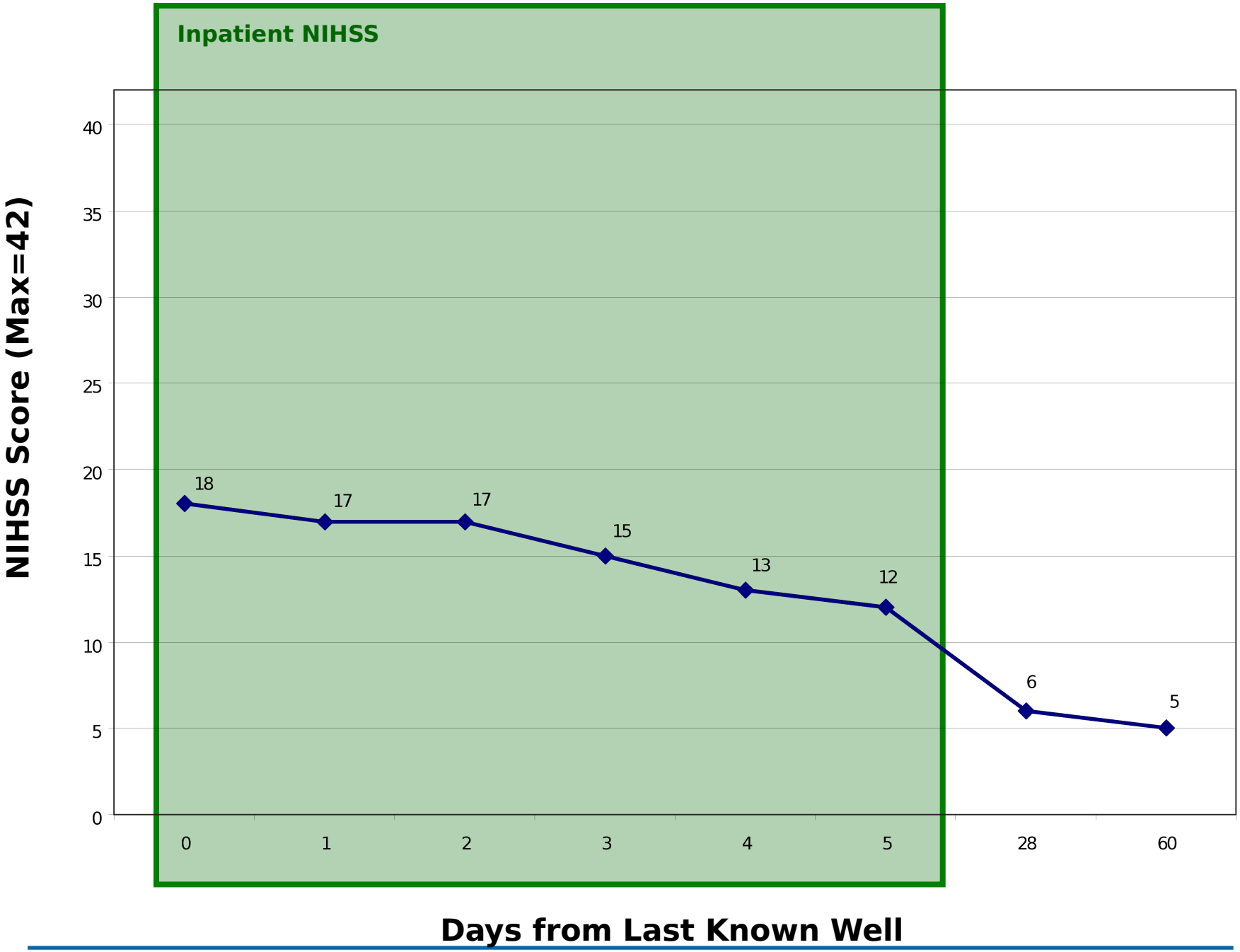
Longitudinal NIH Stroke Scale

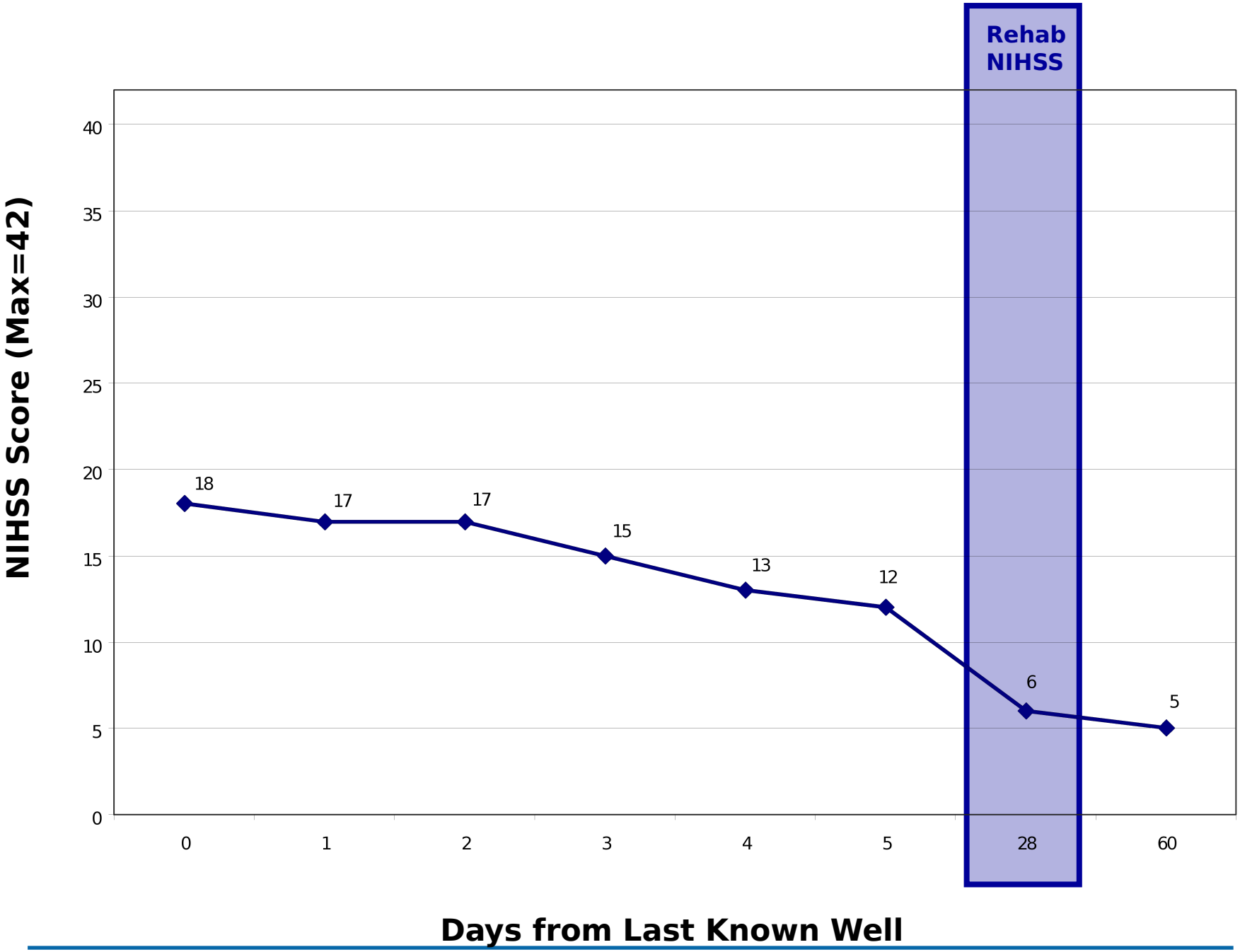
Measures severity of stroke

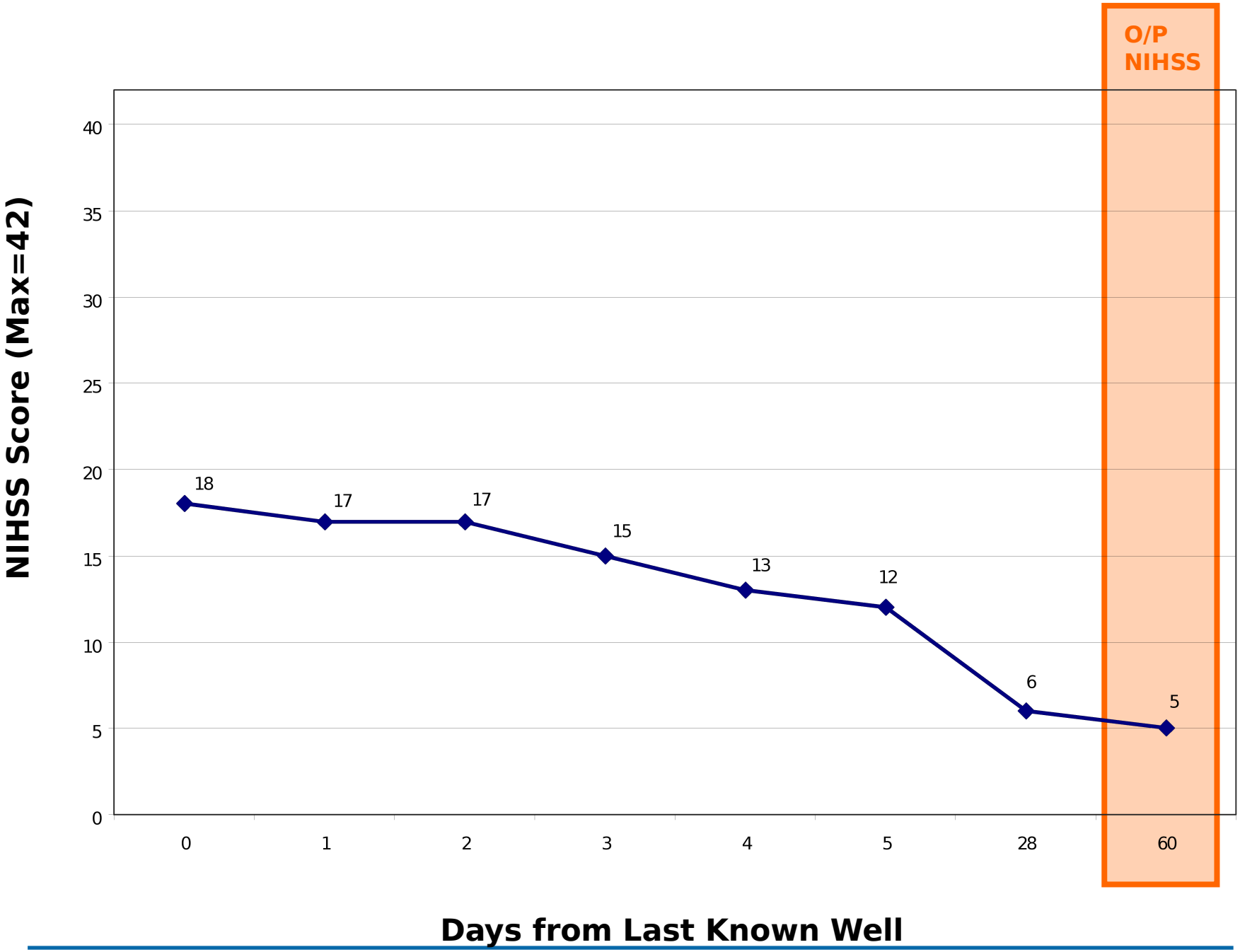
Standardized indicator of stroke patient state

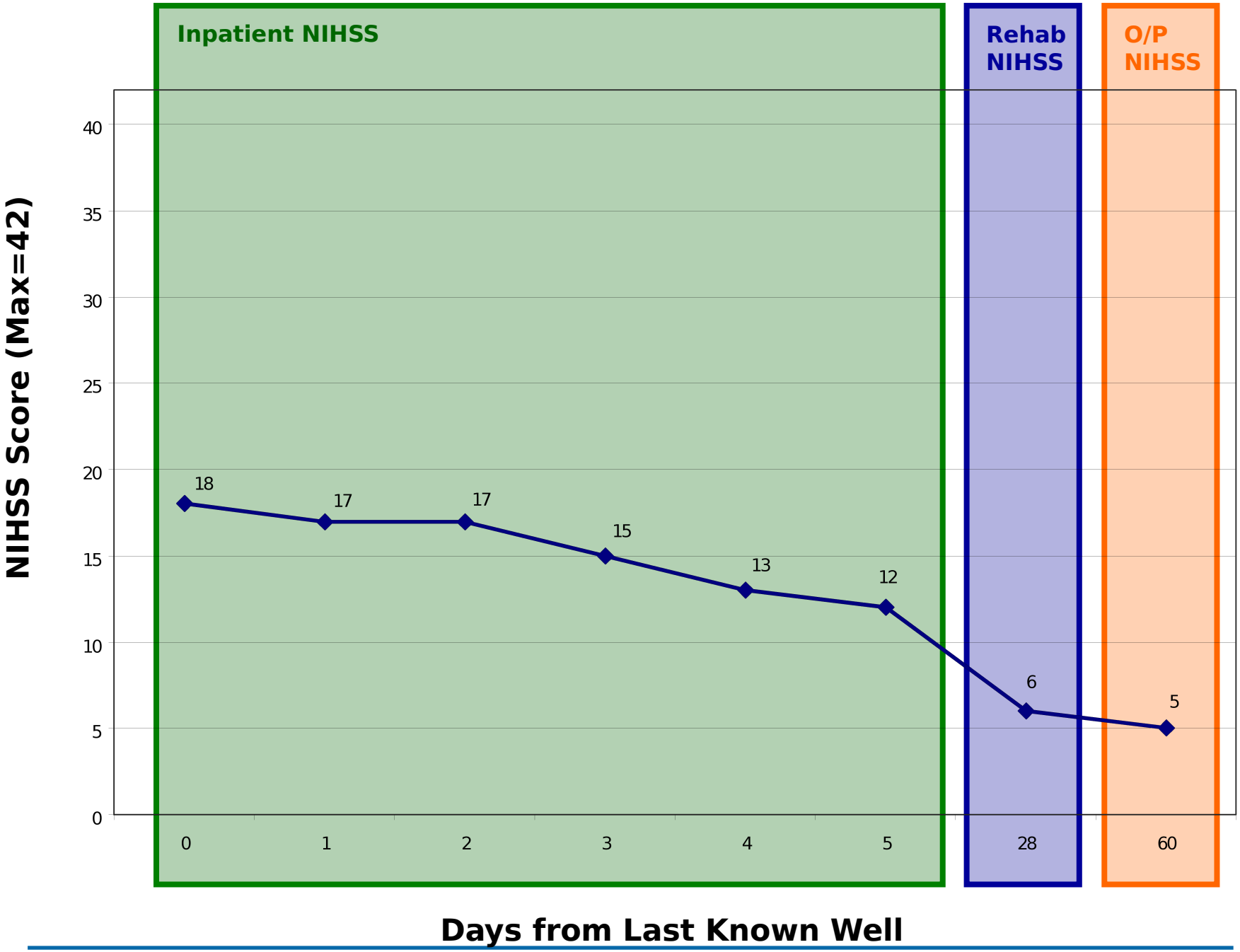
Higher scores indicate greater disability (range 0-42)

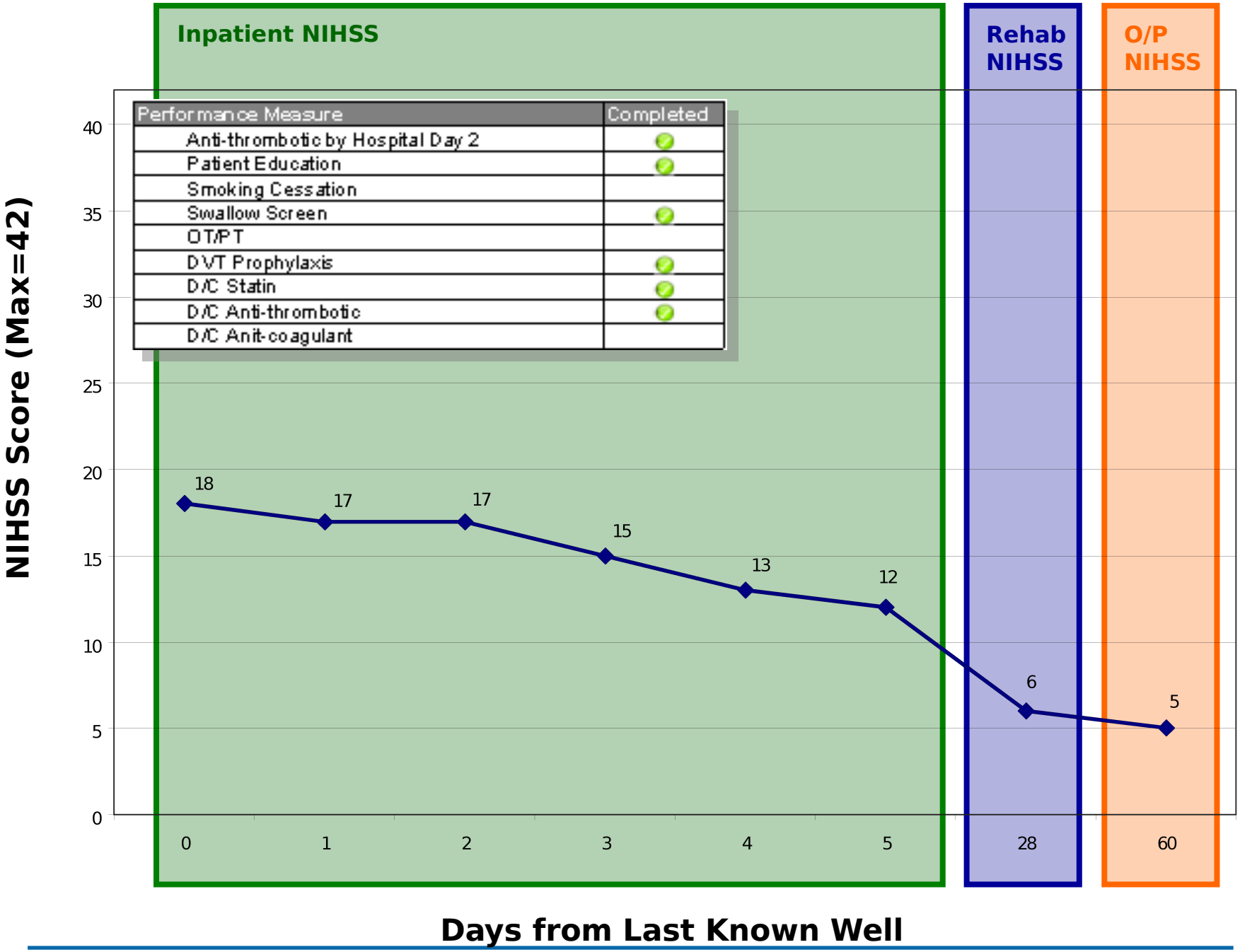


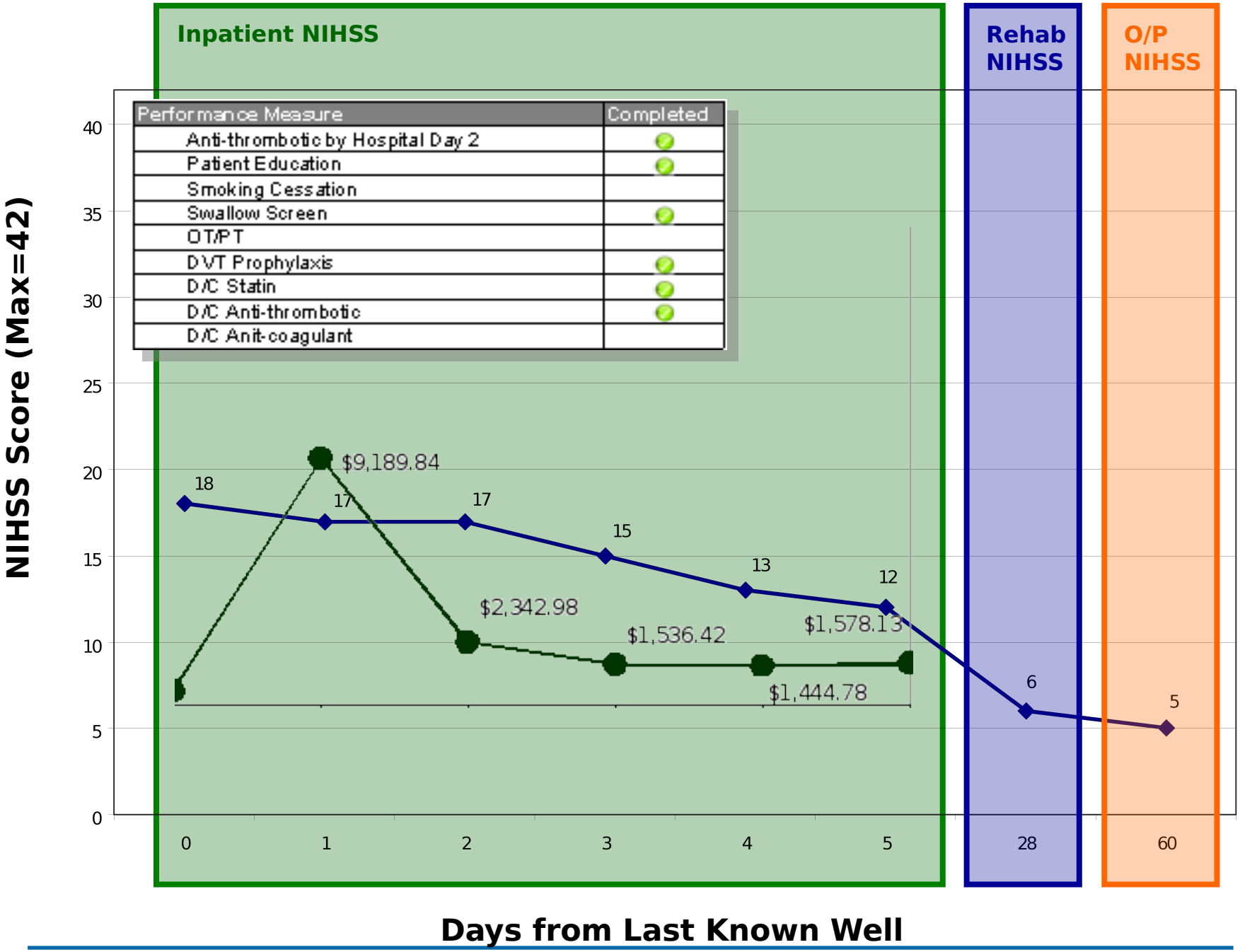


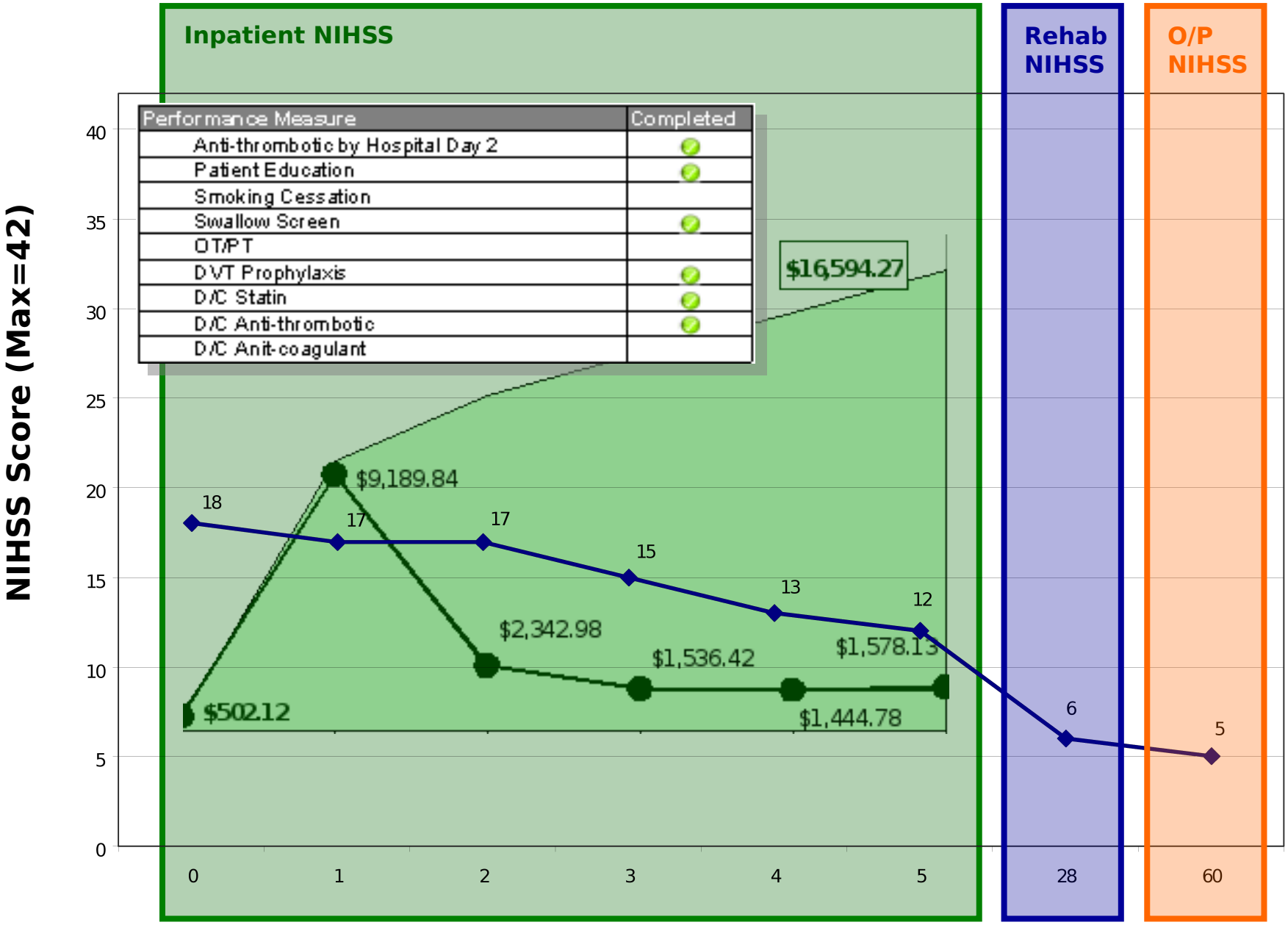












Care Path Summary

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Provides point of care recommendations and reporting at key points in the diagnosis and treatment based on Cleveland Clinic protocols.

Integrates traditional encounter-based, note-centric EMR information capture with discrete data representation and process navigation.

Next steps

Stroke

- Up, running and guiding care
- 1year difficult build

10 more Care Paths in the next 2 years

Make the Care Path agnostic with respect to EMR

High Value Healthcare Collaborative

Mission: Improve healthcare quality and disseminate best practices, while reducing costs.

Cleveland Clinic, Dartmouth-Hitchcock, Denver Health, Geisinger Health System, Intermountain Healthcare and Mayo Clinic.

Combined patient population of more than 10 million.

Data analysis performed by The Dartmouth Institute for Health Policy and Clinical Practice.

Share data on outcomes and clinical protocols for selected conditions and treatments to arrive at optimal care models, which can be implemented by many other healthcare systems across the country.

High Value Healthcare Collaborative

The Cleveland Clinic is honored to nominate the Military Health System as an Affiliate Member in the High Value Healthcare Collaborative

Challenge and Opportunity